Rova Mech Authority

RAIL ACCESS CORPORATION
Technology & Standards Division

Registered ID No.:113-154

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To: **Manager Train Control, Supervisor Network Control, Operations Control, Manager Safeworking**
From: **Michael Uhlig**
Requested by: **Mr Ashok Verma, CityRail.**
Date: **11/02/00**
Subject: **Tangara Set G7 High Speed Trial – Sydney – Newcastle – Sydney.**

Monday 14th February to Wednesday 16th February, 2000

Rova Mech approval is given for Tangara set G7 to undertake high speed testing on the Main Northern line, Central – Newcastle - Central, under the following conditions:

1. The test train may run at speeds nominated by the test engineers accompanying the train, up to the XPT Speedboards, but not exceeding 140 km/h for the UP and DOWN directions between Hornsby and Newcastle, with the following exceptions:

1.1 The test train must travel at NORMAL speed boards when passing vehicles or trains on adjacent lines and sidings.

1.2 The test train must travel at NORMAL speed boards through the following Tunnels:

Boronia No.1	50.750 km to 51.171 km
Boronia No.2	51.769 km to 52.371 km
Boronia No.3	54.338 km to 54.478 km
Boronia No.4	54.702 km to 54.776 km
Long Island	58.178 km to 58.439 km
Mullet Creek	59.324 km to 59.787 km
Woy Woy	67.090 km to 68.860 km
Tickhole	157.635 km to 157.796 km (Down track)

2. The test train shall operate in accordance with note 7b on page 14 of the Standard Working Timetable Instruction Pages, Book 3.

3. The pantograph extension pressures on the test train should be checked to ensure they are within tolerance before the test.

4. The speed of the test train shall be directed by the Test Engineers accompanying and monitoring the performance of the train.

5. The train must not exceed any temporary speed restrictions including speeds imposed by WOLO conditions.

6. All crews working this train must be given a copy of this Rova Mech authority

BRYAN TURNBULL
Manager Rolling Stock Compliance & Services
per:
MICHAEL UHLIG
Senior Engineer, Rolling Stock Standards

Facsimile cover sheet

Number of pages sent	2	Date	11 February, 2000
To	Ashok Verma / Mark Reiper		
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RAIL ACCESS CORPORATION

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HIGH SPEED TESTING OF TANGARA SET G7 CENTRAL- NEWCASTLE - CENTRAL

Attached is a Rova Mech authority to allow testing of this train, as requested.

In addition to the operating conditions stated on the Rova Mech authority, the following additional conditions will apply to the monitoring of the test train:

1. The ride shall be continuously monitored while ever the train speed is in excess of the normal track speed for this vehicle type. The train speed limits shall be adjusted in accordance with point 3 below if the lateral and/or vertical accelerations exceed the limits specified in RSU 288[3].

2. The vehicle roll and lateral displacement shall be continuously monitored while ever the train speed is in excess of the normal track speed for this vehicle. The train speed limits shall be adjusted in accordance with point 3 below if the vehicle roll and/or lateral displacement exceed the limits specified in RSU 110[2].

3. If at any stage during the test, the limits specified in 1. and 2. above are exceeded, the maximum speed for the remainder of the journey shall be limited to 5 km/h less than the XPT speed boards, up to a maximum of 135 km/h. If a further exceedence occurs, then the maximum speed shall be reduced by a further 5 km/h. This procedure for speed reduction will continue until no further exceedences occur, or until the normal speed board speeds are reached.

4. RSA staff shall be in attendance during the testing, representing the Rail Access Corporation, to monitor pantograph and overhead wire bounce. A ground inspection of the pantograph carbons shall be undertaken before and after the test to assess damage caused by pantograph bounce.

5. RSA staff shall be in attendance during the testing, representing the Rail Access Corporation, to monitor signal operations.

The following have been provided with courtesy copies of this Rova Mech. Please ensure that ***all*** personnel concerned with the operation of this train are provided with a copy of this Rova Mech.

Cc	Manager Train Control	94438
	Supervisor Train Control	94941
	Operations Control	94781
	Broadmeadow CTC	52584
	Eugene Saw	33576

Yours faithfully,

Michael Uhlig

Senior Engineer, Rolling Stock Standards

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18 January 2000

Mr. Greg Hunter
A/Principal Electrical Engineer
Rail Access Corporation
55 Market Street
Sydney, N.S.W. 2000

Dear Greg,

150 KPH ELECTRIC TRAIN TEST ON THE DOWN MAIN BETWEEN BLACKTOWN AND ST. MARYS. - OVERHEAD WIRING SUITABILITY.

A video recording of the overhead wiring on the Down Main between Blacktown and St. Marys taken on 17 August 1999 was examined and the overhead wiring in our opinion was found suitable for the proposed 150 kph test provided the following precautions are taken:

1. All high speed tests are carried in the normal direction of train travel.

2. The maximum train speed from Blacktown to the trailing cross over at SL 35+979 (320 Points) is limited to the sign posted electric track speed.

3. The maximum train speed from the type 6 section insulator at SL 46+953 to St. Marys is limited to the sign posted electric track speed.

4. The maximum train speed from the trailing cross over at SL 35+979 (320 Points) to type 6 section insulator at SL 46+953 is limited to 150 kph.

Additional Recommendations

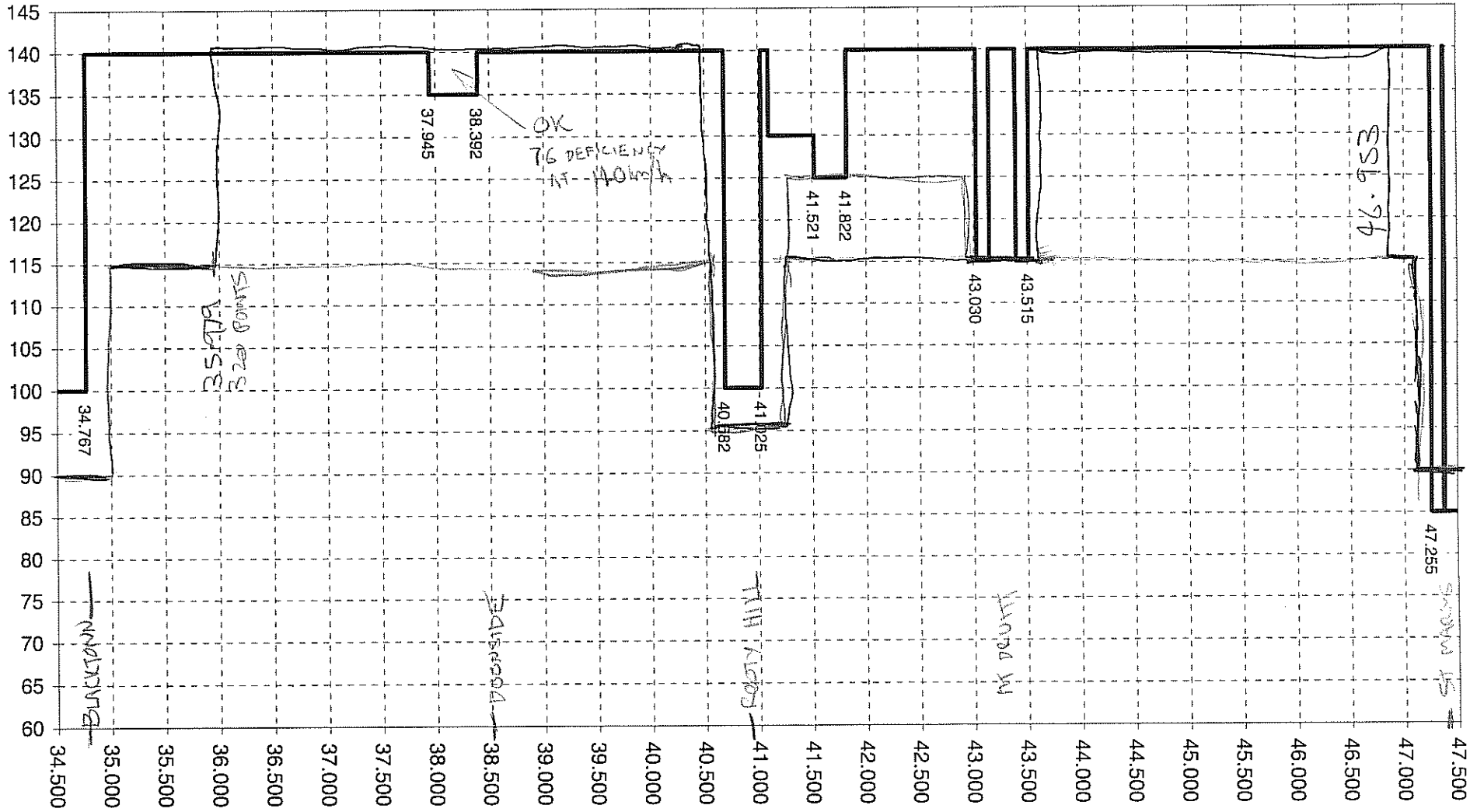
1. The pantograph extension pressures on the test train should be checked to ensure they are within tolerance before the test.

2. The test train speed should be incremented in a maximum of 10 kph steps above the sign posted electric track speed on successive runs until a maximum speed of 150 kph is attained.

3. Video equipment capable of monitoring the pantographs in real time during the test should be installed.

4. An experienced overhead wiring engineer should monitor the tests on board the test train.

5. The overhead wiring engineer should be able to communicate with the driver of the test train so that he can abort the test if major overhead wiring damage is deemed likely.

D. Stuart-Smith
Principal Electrical Engineer

DN Main West Test Speeds